

## Amended Claims

PCT/GB98/00015  
Home et al  
DC277.IP88.040

1.

A sleepiness monitor (10)  
for a vehicle driver or machine operator,  
comprising a sensor (13),  
for registering a vehicle or machine condition factor,  
and attendant control action,  
an input for personal condition history,  
a memory, for storing  
a physiological reference model,  
of circadian rhythm pattern,  
and an operating model or algorithm,  
for determining driver condition or vehicle action,  
and computational means,  
for weighting the operating model  
according to registered condition, history or action,  
and providing a warning indication (18)  
of driver or operator sleepiness.

2.

A sleepiness monitor,  
as claimed in Claim 1,  
including a sensor,  
for vehicle steering wheel movement,  
and attendant directional control.

3.

*a* A sleepiness monitor, *Claim 1*  
as claimed in either of the preceding claims,  
including means for registering steering wheel movement,  
about a reference position,  
the computational means determining  
the character of the route being driven  
and the steering behaviour in relation to that route,  
allowing account to be taken  
of the frequency and amplitude of correction ,  
about a straight-ahead steering position.

4.

*a* A sleepiness monitor, *Claim 1*  
as claimed in any of the preceding claims,  
including a sensor for vehicle acceleration and/or speed.

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AMENDED SHEET

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DC277;IP38.040

5.

A sleepiness monitor,  
as claimed in any of the preceding claims,  
including a temperature sensor,  
for a driver or operator environment.

*claim 1*

6.

A sleepiness monitor,  
as claimed in any of the preceding claims,  
including a sensor for ambient light conditions.

*claim 2*

7.

A sleepiness monitor,  
as claimed in any of the preceding claims,  
including provision for driver or operator input,  
of personal condition factors,  
taken into account by the computational means,  
in weighting the operating model or algorithm,  
and adjusting a threshold of warning indication accordingly.

*claim 1*

8.

A sleepiness monitor,  
as claimed in any of the preceding claims,  
including provision for driver or operator input,  
of personal condition factors,  
including recent sleep history  
and/or alcohol consumption,  
taken into account  
by the computational means,  
in weighting the operating model or algorithm,  
and adjusting a threshold of warning indication accordingly.

*claim 1*

9.

A sleepiness monitor,  
substantially as hereinbefore described  
with reference to and as shown in,  
the accompanying drawings.

*a*

*1*

*a*

10.

A vehicle or machine,  
incorporating a sleepiness monitor, *claim 1*  
as claimed in any of the preceding claims.

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